**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions.**

1. (cancelled)

2. (currently amended) The method as recited in claim ~~1~~ 11, wherein said ~~mammal~~ subject is a human.

3. (currently amended) The method as recited in claim ~~1~~ 11, wherein said HIF-1 mediated gene expression includes activation of expression of at least one gene selected from the group consisting of genes encoding vascular endothelial growth factor (VEGF), glucose transporter isoform 3 (Glut-3), aldolase A (aldo A) and erythropoietin.

4. (currently amended) The method as recited in claim ~~1~~ 11, wherein said 2-oxoacid inhibits hydroxylation of HIF-1 in said cell.

5. (previously presented) The method as recited in claim 4, wherein said hydroxylation is mediated by a prolyl hydroxylase or an asparagine hydroxylase.

6-10. (cancelled)

11. (currently amended) A method of promoting tissue ~~neovascularization~~ vascularization in muscle tissue in a human subject ~~in need of neovascularization~~ suffering from acute hypoxia comprising administering to said subject a composition ~~comprising~~ consisting of an amount of at least one 2-oxoacid selected from the group consisting of ~~pyruvate,~~ oxaloacetate, alpha-ketoisovalerate, alpha-ketoisocaproate, alpha-keto-beta-methylvalerate, methyl esters thereof, ethyl esters thereof and glycerol esters thereof effective to induce HIF-1 mediated gene expression in the subject ~~in need of neovascularization~~ and at least one or more pharmaceutically acceptable excipients or food additives.

12-14. (canceled)

15. (currently amended) The method of claim ~~14~~ 11, wherein said composition is applied topically.

16-17. (cancelled)

18. (withdrawn) A method for protecting a mammal against radiation comprising administering to said mammal a composition comprising at least one 2-oxoacids selected from the group consisting of pyruvate, oxaloacetate, alpha-ketoisovalerate, alpha-ketoisocaproate, alpha-keto-beta-methylvalerate, methyl esters thereof, ethyl esters thereof, and glycerol esters thereof.

19. (withdrawn) The method as recited in claim 18, wherein said composition is administered before exposure to radiation, during exposure to radiation or after exposure to radiation.

20. (withdrawn) The method as recited in claim 19, wherein said composition is administered one hour after exposure to radiation.

21. (withdrawn) The method as recited in claim 19, wherein said composition is administered four hours after exposure to radiation.

22. (withdrawn) The method as recited in claim 19, wherein said composition is administered twenty-four hours after exposure to radiation.

23. (withdrawn) The method as recited in claim 18, wherein said mammal is a human.

24. (previously presented) The method as recited in claim 11, wherein said administering to said subject of said composition is accomplished by at least one method selected from the group consisting of oral administration, mucosal administration, ocular administration, subcutaneous injection, transdermal administration, and combinations thereof.

25. (original) The method as recited in claim 24, wherein said mucosal administration is selected from the group consisting of buccal, endotracheal, nasal, pharyngeal, rectal, sublingual, vaginal, and combinations thereof.

26. (original) The method as recited in claim 24, wherein for said buccal, endotracheal, nasal, pharyngeal, sublingual, and combinations thereof administration, said composition is in a physical form selected from the group consisting of emulsion, gum, lozenge, spray, tablet and an inclusion complex.

27. (original) The method of claim 26, wherein for said rectal and said vaginal administration, said composition is in a physical form selected from the group consisting of cream, douche, enema and suppository.

28. (original) The method as recited in claim 24, wherein said composition for said nasal administration is selected from the group consisting of sniffing powder, and nasal spray.

29. (original) The method as recited in claim 24, wherein said composition for said oral administration is selected from the group consisting of incorporation in food, incorporation into a dietary supplement, incorporation in a drink or powder to be mixed with water or other liquid, chewable tablet or capsule, swallowable tablet, capsule, caplet or softgel, Q-melt strip, bar, lozenge and gum.

30. (original) The method as recited in claim 24, wherein said composition for said ocular administration is selected from suspension, solution and spray.

31. (original) The method as recited in claim 24, wherein said composition for said subcutaneous administration is an incorporation in a pharmaceutically acceptable and injectable carrier.

32. (original) The method as recited in claim 24, wherein said composition for transdermal administration is an incorporation into a lipophilic carrier with a physical form of a topical crème or a physical form of an adhesive patch.

33. (original) The method as recited in claim 24, wherein said composition is administered repetitively with time intervals in the range of from about one hour to about forty-eight hours.

34. (cancelled)

35. (previously presented) The method of claim 11, wherein the 2-oxoacid is oxaloacetate, methyl esters thereof, ethyl esters thereof or glycerol esters thereof.

36. (previously presented) The method of claim 11, wherein the 2-oxoacid is alpha-ketoisovalerate, methyl esters thereof, ethyl esters thereof or glycerol esters thereof.

37. (previously presented) The method of claim 11, wherein the 2-oxoacid is alpha-ketoisocaproate, methyl esters thereof, ethyl esters thereof or glycerol esters thereof.

38. (previously presented) The method of claim 11, wherein the 2-oxoacid is alpha-keto-beta-methylvalerate, methyl esters thereof, ethyl esters thereof or glycerol esters thereof.

39. (new) The method of claim 11 wherein the acute hypoxia is caused by exercise.

40. (new) The method of claim 11 wherein the muscle tissue is skeletal muscle tissue.